OIPE
JAN 11 2002
PATENT & TRADEMARK OFFICE 1680

GAU 2122

CERTIFICATE OF MAILING
I hereby certify that this correspondence is being deposited today with the U.S. Postal Service with sufficient postage as first class mail in an envelope addressed to: Commissioner for Patents, Washington, D.C. 20231

on 11/29/01 Lisa Andreasen
Date Lisa Andreasen

Attorney Docket No. D/99503

RECEIVED
JAN 16 2002
Technology Center 2100

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of Lauri Karttunen et al.

Group Art Unit: 2122

Application No.: 09/737,942

Examiner: Not Yet Assigned

Filed: 12/18/2000

For: METHOD AND APPARATUS FOR CONSTRUCTING FINITE-STATE NETWORKS MODELING NON-CONCATENATIVE PROCESSES

Commissioner for Patents
Washington, D.C. 20231

RECEIVED
MAR 28 2002
Technology Center 2600

Sir:

INFORMATION DISCLOSURE STATEMENT

Pursuant to 37 C.F.R. 1.56, the attention of the Patent and Trademark Office is hereby directed to the reference(s) and information listed on the attached PTO-1449 Form. One legible copy of each is attached to the PTO-1449 Form. It is respectfully requested that the references and information be expressly considered during the prosecution of this application, and that the reference(s) be made of record therein and appear among the "References Cited" on any patent to issue therefrom.

☒ 1. This Information Disclosure Statement is being filed (a) within three months of the U.S. filing date of the above application (which is not a CPA), **OR** (b) before the mailing date of a first Office Action on the merits. *No certification or fee is required.*

☐ 2. This Information Disclosure Statement is being filed more than three months after the U.S. filing date **AND** after the date of the first Office Action on the merits, but before the mailing date of a Final Rejection, Notice of Allowance, or other action that closes prosecution. Please debit Xerox Corporation Deposit Account 24-0025 in the amount of $180.00 in payment of the fee under 37 C.F.R. 1.17(p). *(A copy of this paper is attached.)*

☐ 3. This Information Disclosure Statement is being filed more than three months after the U.S. filing date and after the mailing date of the first Office Action on the merits, but before the mailing date of a Final Rejection or Notice of Allowance; **AND**

☐ a. I hereby certify that each item of information contained in this Information Disclosure Statement was first cited in a communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of this Information Disclosure Statement. 37 C.F.R. 1.97(e)(1); **(OR)**

☐ b. I hereby certify that no item of information in this Information Disclosure Statement was cited in a communication from a foreign patent office in a counterpart foreign application or, to my knowledge after making reasonable inquiry, was known to any individual designated in 37 C.F.R. §1.56(c), more than three months prior to the filing of this Information Disclosure Statement. 37 C.F.R. 1.97(e)(2)

☐ 4. This Information Disclosure Statement is being filed after the mailing date of a Final Rejection or Notice of Allowance, but before the payment of the Issue Fee. Please debit Xerox Corporation Deposit Account 24-0025 in the amount of $180.00 in payment of the fee under 37 C.F.R. 1.17(p) (*A copy of this paper is attached);* **AND**

☐ a. I hereby certify that each item of information contained in this Information Disclosure Statement was first cited in a communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of this Information Disclosure Statement. 37 C.F.R. 1.97(e)(1); **(OR)**

☐ b. I hereby certify that no item of information in this Information Disclosure Statement was cited in a communication from a foreign patent office in a counterpart foreign application or, to my knowledge after making reasonable inquiry, was known to any individual designated in 37 C.F.R. §1.56(c) more than three months prior to the filing of this Information Disclosure Statement. 37 C.F.R. 1.97(e)(2)

☐ 5. Per 37 C.F.R. 1.98(a)(3), a concise explanation of the relevance of each of any submitted item that is NOT in the English language is either enclosed herewith, or incorporated in the application specification.

☐ 6. A copy of an English language version of an above-referenced counterpart foreign application search report is attached.

☐ 7. Copies of some or all of the subject references were cited by, or submitted to the Office in related parent Application No. , filed , which is relied upon under 35 U.S.C. §120. Thus, copies of these references are not attached (except for copies of cited pending applications). 37 C.F.R. §1.98(d).

☐ 8. A copy of each copending application recited in the parent application of paragraph 7 above, and/or a copy of other related copending applications, is enclosed.

Thomas Zell

Thomas Zell
Signature under 37 CFR 1.33 & 34
Registration No. **37,481**
Telephone No. **650-812-4282**
Date **11/23/2001**

RECEIVED
JAN 16 2002
Technology Center 2100

Form PTO-1449 US Dept. of Commerce PATENT & TRADEMARK OFFICE	ATTY DOCKET NO. D/99503	APPLICATION NO. 09/737,942
INFORMATION DISCLOSURE STATEMENT (Use several sheets if necessary)	APPLICANT Lauri Karttunen et al.	
	FILING DATE 12/18/2000	GROUP ART UNIT 2122

OIPE JC80 JAN 11 2002 PATENT & TRADEMARK OFFICE

U.S. PATENT DOCUMENTS

EXAMINER INITIAL	DOCUMENT NUMBER	PUBLICATION DATE	NAME OF PATENTEE	CLASS	SUB CLASS
	5,594,641	1/14/97	Kaplan et al.	395	601
	5,625,554	4/29/97	Cutting et al.	364	611
	5,642,522	6/24/97	Zaenen	395	794

RECEIVED
MAR 28 2002
Technology Center 2600

FOREIGN PATENT DOCUMENTS

	COUNTRY	DOCUMENT NUMBER	PUBLICATION DATE	NAME OF PATENTEE OR APPLICANT	TRANSLATION Y/N

OTHER DOCUMENTS (Including Author (in CAPS), Title, Publication Date, Pages, etc.)

	EVAN L. ANTWORTH. "PC-KIMMO: a two-level processor for morphological analysis". Section 6.4 "Nonconcatenative processes" to section 6.4.7 "Reduplication with coalescence", in Number 16 of Occasional publications in academic computing. Summer Institute of Linguistics, Dallas. Pages 151-161. 1990.
	KENNETH R. BEESLEY, TIM BUCKWALTER, AND STUART N. NEWTON. "Two-level finite-state analysis of Arabic morphology". In Proceedings of the Seminar on Bilingual Computing in Arabic and English, Cambridge, England, September 6-7. No pagination. 1989.
	KENNETH R. BEESLEY. "Finite-state description of Arabic morphology". In Proceedings of the Second Cambridge Conference on Bilingual Computing in Arabic and English, September 5-7. No pagination. 1990.
	KENNETH R. BEESLEY. "Computer analysis of Arabic morphology: A two-level approach with detours". In Bernard Comrie and Mushira Eid, editors, Perspectives on Arabic Linguistics III: Papers from the Third Annual Symposium on Arabic Linguistics, pages 155-172. John Benjamins, Amsterdam. 1991.
	KENNETH R. BEESLEY. "Arabic finite-state morphological analysis and generation". In COLING'96, volume 1, pages 89-94, Copenhagen, August 5-9. Center for Sprogteknologi. The 16th International Conference on Computational Linguistics. 1996.
	KENNETH R. BEESLEY. "Arabic morphological analysis on the Internet". In ICEMCO-98, Cambridge, April 17-18. Centre for Middle Eastern Studies. Proceedings of the 6th International Conference and Exhibition on Multi-lingual Computing. Paper number 3.1.1; no pagination. 1998.
	KENNETH R. BEESLEY. "Arabic morphology using only finite-state operations". In Michael Rosner, editor, Computational Approaches to Semitic Languages: Proceedings of the Work-shop, pages 50-57, Montréal, Québec, August 16. Université de Montréal. 1998.
	KENNETH R. BEESLEY. "Arabic stem morphotactics via finite-state intersection". Paper presented at the 12th Symposium on Arabic Linguistics, Arabic Linguistic Society, 6-7 March, 1998, Champaign, IL.
	KENNETH R. BEESLEY. "Consonant Spreading in Arabic Stems". In COLING-ACL'98, Volume 1, pages 117-123. August 1998.
	KENNETH R. BEESLEY AND LAURI KARTTUNEN. "Finite-State Non-Concatenative Morphotactics". SIGPHON-2000, Proceedings of the Fifth Workshop of the ACL Special Interest Group in Computational Phonology, pp. 1-12, August 6, 2000, Luxembourg.

EXAMINER	DATE CONSIDERED

Examiner: Initial if citation considered, whether or not citation is in conformance with M.P.E.P. 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

OIPE JC80
JAN 11 2002
PATENT & TRADEMARK OFFICE

RECEIVED
JAN 16 2002
Technology Center 2100

Form PTO-1449 U.S. Department of Commerce PATENT & TRADEMARK OFFICE	ATTY DOCKET NO. D/99503	APPLICATION NO. 09/737,942
INFORMATION DISCLOSURE STATEMENT (Use several sheets if necessary)	APPLICANT Lauri Karttunen et al.	
	FILING DATE 12/18/2000	GROUP ART UNIT 2122

OTHER DOCUMENTS (Including Author (in CAPS), Title, Publication Date, Pages, etc.)

	LAURI KARTTUNEN, RONALD M. KAPLAN, AND ANNIE ZAENEN. "Two-level morphology with composition". In COLING'92, pages 141-148, Nantes, France, August 23-28. 1992.
	LAURI KARTTUNEN. "Finite-state lexicon compiler". Technical Report ISTL-NLTT-1993-04-02, Xerox Palo Alto Research Center, Palo Alto, CA, April, 1993.
	LAURI KARTTUNEN. "Constructing lexical transducers". In COLING'94, Kyoto, Japan. 1994.
	LAURI KARTTUNEN, JEAN PIERRE CHANOD, GREG GREFENSTETTE, AND ANNE SCHILLER. "Regular expressions for language engineering". Natural Language Engineering 2 (4), 305-328. 1996.
	LAURI KARTTUNEN, TAMÁS GAÁL, AND ANDRÉ KEMPE 1997. "Xerox Finite-State Tool". Technical Report. Xerox Research Centre Europe, Grenoble. Meylan, France. June 1997.
	LAURA KATAJA AND KIMMO KOSKENNIEMI. "Finite-state description of Semitic morphology: A case study of Ancient Akkadian". In COLING'88, pages 313-315. 1988.
	MARTIN KAY. "Nonconcatenative finite-state morphology". In Proceedings of the Third Conference of the European Chapter of the Association for Computational Linguistics, pages 2-10. 1987.
	GEORGE ANTON KIRAZ AND EDMUND GRIMLEY-EVANS. "Multi-tape automata for speech and language systems: A Prolog implementation". In Jean-Marc Champarnaud, Denis Maurel, and Djelloul Ziadi, editors, Automata Implementation, volume 1660 of Lecture Notes in Computer Science. Springer Verlag, Berlin, Germany. 1999.
	GEORGE ANTON KIRAZ. "Multi-tape two-level morphology: a case study in Semitic non-linear morphology". In COLING'94, volume 1, pages 180-186. 1994.
	GEORGE ANTON KIRAZ. "Semhe: A generalised two-level system". In Proceedings of the 34th Annual Meeting of the Association of Computational Linguistics, Santa Cruz, CA. 1996.
	GEORGE ANTON KIRAZ. "Multi-tiered non-linear morphology: A case study on Syriac and Aribic". Computational Linguistics, Volume 26, Number 1. 2000.
	KIMMO KOSKENNIEMI. "Two-level morphology: A general computational model for word-form recognition and production". Publication 11, University of Helsinki, Department of General Linguistics, Helsinki. 1983. (See in particular pages 27-28.)
	ALON LAVIE, ALON ITAI, UZZI ORNAN, AND MORI RIMON. "On the applicability of two level morphology to the inflection of Hebrew verbs". In Proceedings of ALLC III, pages 246-260. 1988. (See in particular bottom of page 248.)
	JOHN J. MCCARTHY AND ALAN PRINCE. "Faithfulness and reduplicative identity". Occasional papers in Linguistics 18, University of Massachusetts, Amherst, MA. ROA-60. 1995.
	JOHN J. MCCARTHY. "A prosodic theory of nonconcatenative morphology". Linguistic Inquiry, 12(3):373-418. 1981.
	RICHARD SPROAT. "Morphology and Computation". Section 2.4.4 "Nonconcatenative morphology, MIT Press, Cambridge, MA. Pages 159-170. 1992.

EXAMINER	DATE CONSIDERED

Examiner: Initial if citation considered, whether or not citation is in conformance with M.P.E.P. 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

RECEIVED
MAR 2 8 2002
Technology Center 2600